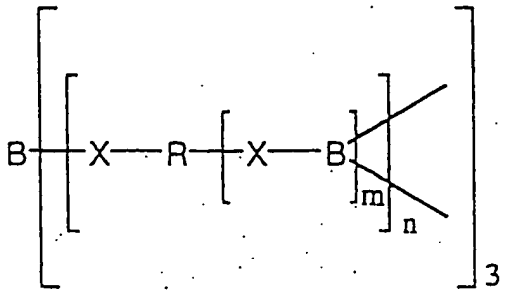
A1
Cont.

F-6892

2. (Amended) The ion-conductive polymeric compound according to claim 1 having being represented by the following general formula (1)



(1)

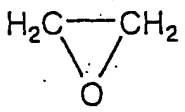
wherein X represents a hetero-atom, R represents a divalent to hexavalent group having a molecular weight of at least 150, m represents an integer of 1 to 5, and n represents a recurring number of 1 or more.

3. (Amended) The ion-conductive polymeric compound according to claim 1 or 2, wherein the hetero-atom represented by X in general formula (1) is an oxygen atom.

4. (Amended) The ion-conductive polymeric compound according to claim 1 or 2, wherein the group represented by R in general formula (1) is a polymer or a copolymer of compound (A) represented by the following formula (2) and/or compound (B) represented by the following formula (3)

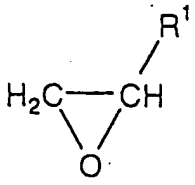
A 1
Cont.

compound (A)



(2)

compound (B)



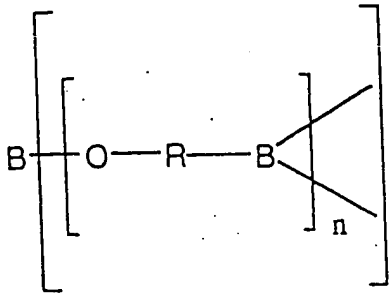
(3)

wherein R^1 represents a methyl group, an ethyl group, a propyl group, a butyl group or a group represented by the following formula (4)

$$-CH_2-[-CH_2CH_2O-]_r-Ra \qquad (4)$$

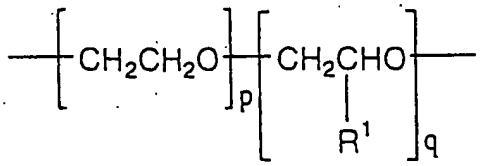
wherein r represents 0 or an integer of 1 or more, and Ra represents a methyl group, an ethyl group, a propyl group or a butyl group.

5. (Amended) The ion-conductive polymeric compound according to claim 1 having the following general formula (5)



(5)

wherein R represents a divalent group having a molecular weight of at least 150, represented by the following formula (6), and n represents a recurring number of 1 or more



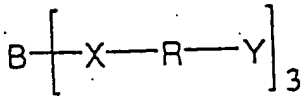
(6)

wherein R^1 is a methyl group, an ethyl group, a propyl group, a butyl group or a group represented by the following formula (4), p represents an integer of 0 to 38,000, and q represents an integer of 0 to 28,000, provided p and q are not 0 at the same time

$$-CH_2-[-CH_2CH_2O-]_r-Ra \qquad (4)$$

wherein r represents 0 or an integer of 1 or more, and Ra represents a methyl group, an ethyl group, a propyl group or a butyl group.

6. (Amended) The ion-conductive polymeric compound according to claim 1 obtained by crosslinking a compound represented by the following general formula (7)



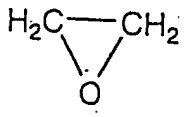
(7)

A1
Cont.

wherein X represents a hetero-atom, R represents a divalent group having a molecular weight of at least 150, and Y represents a polymerizable functional group.

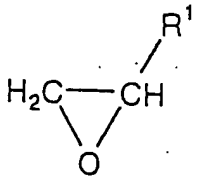
7. (Amended) The ion-conductive polymeric compound according to claim 6, wherein R in general formula (7) is a polymer or a copolymer of compound (A) represented by the following formula (2) and/or compound (B) represented by the following formula (3)

compound (A)



(2)

compound (B)



(3)

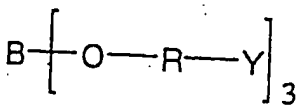
wherein R^1 represents a methyl group, an ethyl group, a propyl group, a butyl group or a group represented by the following formula (4)

A1 cont.

$$-CH_2-[-CH_2CH_2O-]_r-Ra \qquad (4)$$

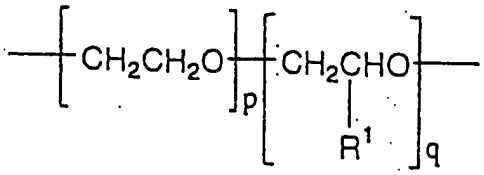
wherein r represents 0 or an integer of 1 or more, and Ra represents a methyl group, an ethyl group, a propyl group or a butyl group.

8. (Amended) The ion-conductive polymeric compound according to claim 6 or 7, wherein the compound represented by general formula (7) is represented by the following general formula (8)



(8)

wherein R represents a divalent group having a molecular weight of at least 150, represented by the following formula (6), and Y represents a polymerizable functional group



(6)

wherein R^1 represents a methyl group, an ethyl group, a propyl group, a butyl group or a group represented by the following formula (4), p represents an integer of 0 to 38,000, and q represents an integer of 0 to 28,000, provided p and q are not 0 at the same time

A1
Cont.

$$-CH_2-[-CH_2CH_2O-]_r-Ra \qquad (4)$$

wherein r represents 0 or an integer of 1 or more, and Ra represents a methyl group, an ethyl group, a propyl group or a butyl group.

9. (Amended) The ion-conductive polymeric compound according to claim 6 or 7, wherein the polymerizable functional group represented by Y is one or more selected from the group consisting of an acrylic residue, a methacrylic residue, an allyl group and a vinyl group.

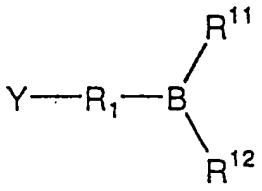
10. (Amended) The ion-conductive polymeric compound according to claim 1, in which a boron atom is in a polymeric side chain.

11. (Amended) The ion-conductive polymeric compound according to claim 1, in which a boron atom is bound to an end of a polymeric main chain and/or a polymeric side chain as a part of a boron compound.

12. (Amended) The ion-conductive polymeric compound according to claim 10 or 11, in which a boron atom is bound to an end of a polymeric side chain as a part of an organoboron compound.

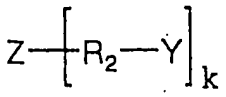
A1 cont.

13. (Amended) The ion-conductive polymeric compound according to claim 10 or 11 obtained by polymerizing a mixture of compounds represented by the following formulas (9) and (10) respectively



(9)

wherein R_1 represents a divalent group having a molecular weight of at least 100, Y represents a polymerizable functional group, and R^{11} and R^{12}, which may be the same or different, each represent a hydrogen atom, a halogen atom or a monovalent group, or R^{11} and R^{12} are bound to each other to form a ring



(10)

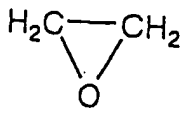
wherein R_2 represents a divalent group having a molecular weight of at least 150, Y represents a polymerizable functional group, Z represents an active hydrogen residue, and k represents an integer of 2 to 6.

14. (Amended) The ion-conductive polymeric compound according to claim 13, wherein R_1 in general formula (9) and/or R_2 in general formula (10) is a

A1
Cont.

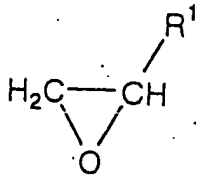
polymer of compound (A) represented by the following formula (2) and/or compound (B) represented by the following formula (3)

compound (A)



(2)

compound (B)



(3)

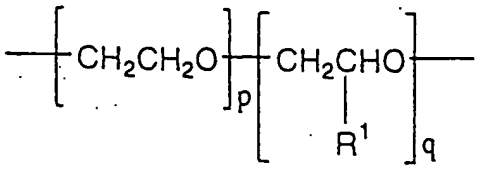
wherein R^1 represents a methyl group, an ethyl group, a propyl group, a butyl group or a group represented by the following formula (4)

$$-CH_2-[-CH_2CH_2O-]_r-Ra \qquad (4)$$

wherein r represents 0 or an integer of 1 or more, and Ra represents a methyl group, an ethyl group, a propyl group or a butyl group.

15. (Amended) The ion-conductive polymeric compound according to claim 13, wherein R_1 in general formula (9) and/or R_2 in general formula (10) is a divalent group represented by the following formula

A1 cont.



(6)

wherein R^1 represents a methyl group, an ethyl group, a propyl group, a butyl group or a group represented by the following formula (4), p represents an integer of 0 to 38,000, and q represents an integer of 0 to 28,000, provided p and q are not 0 at the same time

$$-CH_2-[-CH_2CH_2O-]_r-Ra \qquad (4)$$

wherein r represents 0 or an integer of 1 or more, and Ra represents a methyl group, an ethyl group, a propyl group or a butyl group.

16. The ion-conductive polymeric compound according to claim 13, wherein R^{11} and R^{12} in general formula (9) are one or more selected from the group consisting of an alkyl group, an aryl group, derivatives thereof and fluorine-substituted derivatives thereof.

A2

18. (Amended) A polymeric electrolyte comprising one or more of the ion-conductive polymeric compounds according to any one of claims 1, 2, 6, 7, 10 and 11.

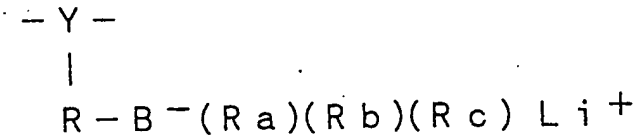
A2 Cont.

19. (Amended) The polymeric electrolyte according to claim 18, further comprising a nonaqueous solvent.

20. (Amended) The polymeric electrolyte according to claim 19, wherein the nonaqueous solvent is an aprotic solvent.

A3

22. (Amended) The polymeric electrolyte according to claim 21, wherein the polymeric compound has a structural unit represented by the following general formula (11) in a molecule

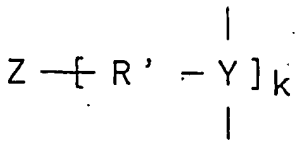


(11)

wherein Y represents a residue of a polymerizable functional group, R represents a group capable of being bound to the polymerizable functional group and the boron atom and having a molecular weight of at least 40, and Ra, Rb and Rc, which may be the same or different, each represent a group capable of being bound to the boron atom.

A3 Cont

23. The polymeric electrolyte according to claim 22, wherein the polymeric compound is a copolymer further having a structural unit represented by the following general formula (12)



(12)

wherein Y represents a residue of a polymerizable functional group, Z represents a residue of an active hydrogen compound, R' represents a divalent group having a molecular weight of at least 150, and k represents an integer of 2 to 6.

24. (Amended) The polymeric electrolyte according to claim 21, which further comprises an aprotic solvent.

25. (Amended) The polymeric electrolyte according to any one of claims 21 to 23, which further comprises an electrolytic salt.

26. (Amended) The polymeric electrolyte according to claim 25, wherein the electrolytic salt is a lithium salt.

27. (Amended) The polymeric electrolyte according to claim 26, wherein the lithium salt is one or more selected from the group consisting of $LiBF_4$, $LiPF_6$, $LiClO_4$, $LiAsF_6$, $LiCF_3SO_3$, $LiN(CF_3SO_2)_2$, $LiN(C_2F_5SO_2)_2$, $LiC(CF_3SO_2)_3$, LiCl, LiF, LiBr, LiI, derivatives and thereof.

28. (Amended) The polymeric electrolyte according to claim 24, wherein the aprotic solvent is one or more selected from the group consisting of carbonates, lactones, ethers, sulfolanes and dioxolanes.

29. (Amended) An electric device comprising the polymeric electrolyte according to claim 18.

30. (Amended) A cell comprising a positive electrode, a negative electrode and the polymeric electrolyte according to claim 18, said electrodes being linked through said electrolyte.

31. (Amended) The cell according to claim 30, wherein the positive electrode is made of a double metal oxide capable of occluding and releasing lithium ions, and the negative electrode is made of a lithium metal, a lithium alloy or a compound capable of occluding and releasing lithium ions reversibly.